ISSUES LOG for ISO/IS 10303-232

Issues are from DIS ballot comments.   Document created by : Glen Ziolko   Date: 2001-11-16   Document: **ISO/ IS 10303-232 N1063**

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
SA - 1	Clause 4.2.13.1 Action_status	Table 3	editorial	NOTE 2 refers to "Table 2". Should be "Table 3". Furthermore, it would make better sense for this note and Table 3 to be moved to the following Clause 4.2.13.2 change_code, since the information presented in the table relates to the various values of change_code, not to action_status.	Make the corrections described in the Comment column.\n\nResolution: Incorporate proposed solution	
SA –2	Annex G	Figure G.7 ARM EXPRESS –G diagram 7	editorial	What is the meaning of the word "unique" that appears near the attribute name parts_tabulations ?	Remove the word.\n\nResolution: Incorporate proposed solution	
SA – 3	4.3.298 Parts_list_body to Item_list		editorial	The word "exactly" is extraneous.	Remove the word.\n\nResolution: Incorporate proposed solution	
SA – 4	5.2.4.24 product_requires_person_organization		editorial	A NOTE says, "Related to mapping rule 14." Does this mean mapping **table** rule? If so, it should be mapping table rule 13, not 14.	Correct the text.\n\nResolution: Add #3 to reference path.	
SA – 5		Table 6 - Mapping Table for Data_list	editorial	Extra "#3" in the AIM element column for data_list_entry to special_conditions on page 416.	Remove the "#3"\n\nResolution: Incorporate proposed solution	
SA – 6		Table 4 – Mapping Table for Common	editorial	Contract to Identifier (contract_data_requirements_list) has extra "_number" at end of role name on page 289.	Remove the "_number".\n\nResolution: Incorporate proposed solution	
SA – 7		Table 4 – Mapping Table for Common	editorial	Contract to Identifier (commercial_item_description) This role is not in the ARM…page 290.	Remove the extra role name and correct the remaining role name.	

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				Also the role data_item_description_number should be data_item_description_identification	Resolution: Incorporate proposed solution	
SA – 8	4.3.30 Change_identif ication to Status		editorial	Due to the AIM structure it is not possible for Status to define action_status either for more than one Change_identification or for zero Change_identification.	The second sentence should read, "Each Status defines action_status for exactly one Change_identification object." Resolution: Incorporate proposed solution	
SA – 9	4.2.38 Distribution_n otice		minor technical	Distribution_notice.distribution_authorit y can not be OPTIONAL due to RULE approval_requires_approval_person_or ganization.	Make all necessary changes in the ARM. Resolution: Incorporate proposed solution GZ	
SA – 10	4.2.4.2 Alternate_elem ent_identificati on		minor technical	Alternate_element_identification.design _activity can not be OPTIONAL, due to a conflict with Mapping Table Rule 13 and global RULE document_requires_person_organizatio n.	Make all necessary changes in the ARM. Resolution: Incorporate proposed solution	
SA – 11	4.2.45 Element_type		minor technical	Attribute type_of_coding_scheme should not be OPTIONAL in order to harmonize with the PDM Schema Modules, which require that product_category used for other than primary product identification must provide a value for product_category.description. Note that in the case of Element_type, always used in conjunction with Element_identification, there must always be a product_category with attribute name = "document", which is one of the primary product identification categories required by the PDM Schema Modules. Therefore	There are not rules in AP 214 or the PDM modules that enforce the instantiation of the descriptive attribute in a product_category representing a secondary categorization. Resolution: No change in AP 232 document , but will add this to the AP 232 recommended practice guide. GZ	

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				Element_type always provides a "secondary" categorization, and so requires the presence of attribute type_of_coding_scheme.		
SA – 12	4.2.80 Item_identification		minor technical	Attribute classifications should not be OPTIONAL in order to provide interoperability with the PDM Schema Modules. That is, whenever object Item_identification occurs, an instance of Item_type must also be provided in order to satisfy the PDM Schema requirement for a product_category that provides primary product identification.	Make all necessary changes in the ARM. Resolution: Make Item_identification.classification attribute non Optional.	
SA – 13	Clause 4.2.69 Indentured_data_list_entry		minor technical	The Boeing DCAC usage of Indentured Data List requires net change information. Object Retrofit_usage is currently applied in Parts List (Conformance Class 4) only; this object would provide the needed capability in Indentured Data List (Conformance Class 6).	Request that a new relationship be added between Indentured_data_list_entry and Retrofit_usage (to be called retrofit). Resolution: Incorporate proposed solution.	
SA – 14			minor technical	Found in the compiling of a mapping from the ODETTE ENGDAT standard to AP 232 conformance class 1. The purpose of ENGDAT is to serve as a header file to precede exchanges of technical data. The header file contains various PDM meta-data concerning one or more technical data files which follow it. Technical data files may be drawings in any format, or designs, or merely textual documents; there is no constraint as to type. However, there is no support for hierarchies among these technical files. In essence, one transmits an ENGDAT file, and follows it with the therein-described technical files. The recipient uses the ENGDAT file to determine how many files he was intended to	Request the addition of a CC1 ARM constructs which would map these ENGDAT requirements through to the AP 232 AIM, where I'm sure there are already adequate constructs Resolution: Add File_relationship object to the ARM. This generalizes the file relationship capability already in the File.native_format_file_name attribute.	

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				receive, what they are called, what they contain in general terms, and what he is supposed to do with them. The ENGDAT file, plus the technical data files follow it, constitute a "data exchange" for the sake of this issue. Each ENGDAT file also contains a repeating block called EFC. There is one of these blocks for each of the technical data files in the data exchange. This block in turn contains a segment called LOF, for "Link to Other Files". There may be zero or more of these links within each EFC. LOF enables the ENGDAT file to encode the existence of a relationship between the file which is the current subject of the EFC block, and any other file in the data exchange.

The only information it can encode is the name of that other file, it's sequence number in this data exchange, and the purpose of the link. AP 232 CC1 does not have a mapping for these fields. | | |
| SA – 15 | | | minor technical | Each ENGDAT file contains a repeating block called EFC.   There is one of these blocks for each of the technical data files in the data exchange.   This block in turn contains a segment called DSD, for "Drawing Specification Details". It enables the ENGDAT file to encode further information about one or more drawings which may exist within the file which is the current subject of the EFC block. The only information it encodes which cannot be found in AP 232 is one called "drawing type". Examples of the meaning of this field in ENGDAT include: 1   Direct material | Request the addition of a CC1 ARM construct which would map this ENGDAT requirement through to the AP 232 AIM, where I'm sure there is already an adequate construct.

Resolution: Add File.file_content_type ARM object to clarify this capability already inherently provide in the AIM. | |

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				2 Auxiliary material normalised 3 Auxiliary material not normalised 4 Experimental construction material CC Colour comparisor E2 Electronic drawing E3 Electronic model H2 Hardcopy drawing H3 Hardcopy model MS Material sample TS Technical specification (Ignore the alphanumeric codes which ENGDAT uses as shorthand for the values)		
SA – 16			minor technical	Each ENGDAT file contains a repeating block called EFC. There is one of these blocks for each of the technical data files in the data exchange. This block in turn contains an optional segment called SEC, for "SECurity information". It enables the ENGDAT file to encode three fields relevant to the technical file about which the current EFC block is concerned: an "encryption checksum" and an "encryption key". I cannot find mappings for these in AP 232 CC1. (The "authentication" field, however, maps well to AP 232 ARM "release_authentication.authentication")	Request the addition of CC1 ARM constructs as necessary which would map these ENGDAT requirements through to the AP 232 AIM, where there should already be adequate constructs Resolution: File note attached in the property of a file that could be used to accomplish. To Clarify more completely add attribute to file called file_note.	
SA – 17	Clause 5.1 Mapping table	Table 4 – Mapping table for common, Company_code to Text (type_of_code)	editorial	identification_assignment misspelled as identification_assingment in Reference Path column	Correct spelling Resolution: Fix as proposed	
SA – 18	Clause 5.1 Mapping table	Table 11 – Mapping table for parts_list, item_list to item_identification (list_for)	editorial	AIM element column shows #1, #2 (PATH) #3 (NOT APPLICABLE), but condition #2 is also not applicable. Applies also to Reference path column	Show the mapping as not applicable for condition #2 Resolution: Fix as proposed	

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SA – 19	Clause 4.1.1		editorial	The inclusion of "document_usage_parameter" in CC1 seems to be a mistake. It is only used by reference_document_usage, which itself isn't found in CC1.	Correct in the obvious manner. Resolution: Document_usage_parameter is a valid requirement in CC1. What is missing from CC1 is reference_document_usage. Refereence_document_usage will be added to clause 4.1.1. It is already in the Parts_list mapping table. and referenced from made_from_stock_material Since referenc_usage is referece from item and contract, both reference_document_usage and document_usage_parameter mappings will be included in the common table and added to all UoFs except presentation.	
SA – 20	Clause 4.1.1		editorial	"tem" should be "Item"	Correct spelling Resolution: Incorporate proposed solution Already fixed on DIS document.	
SA – 21	Clause 4.1.1		editorial	"Yes_no" cannot be found in section 4.2.	Correct in the obvious manner. Type Yes_no referenced in 4.2.22.9 (master_file) Resolution: Remove Yes_no from the CC1, CC2, and CC3 UoF lists and UoF table. Yes_no is a defined type and not an ARM object.	
SA – 22	Clause 4.1.9		editorial	"Security_classsification"	Correct spelling Resolution: Incorporate proposed solution	
SA – 23	Clause 4.2.27		editorial	"thier"	Correct spelling	

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					Resolution: Incorporate proposed solution	
SA – 24	Clause 4.2.64.1		editorial	"utilized an Item" should be "utilize an Item"	Correct as noted Resolution: Incorporate proposed solution	
SA – 25	Clause 4.2.96.2		editorial	"variable with in the" should be "variable within the"	Correct as noted Resolution: Incorporate proposed solution	
SA – 26	Clause 4.2.147 & 4.2.147.1		editorial	interchangeable use of "creating_interface" and "creating_system".	Pick just one, since the meaning is intended to be the same thing. Probably should be "creating_interface". Resolution: Incorporate proposed solution to use "creating_interface"	
SA – 27	Annex G		editorial	The heading TYPE is followed by incorrect indentation of the rest of the annex's text.	Correct formatting Resolution: Current format in DIS is fixed and should be acceptable. Must have had older version of AP 232	
SA – 28	Annex G		editorial	The first entry after the heading ENUMERATION OF is missing the dot leader line between it and its figure designation (G.6)	Correct as noted. Resolution: Current format in DIS is fixed and should be acceptable. Must have had older version of AP 232	
SA – 29	Annex G		editorial	The third entry under the heading ENTITY is misspelled …identificiation	Correct spelling Resolution: Incorporate proposed solution	
SA – 30	Annex G		editorial	The fifth through seventh entries under the heading ENTITY are missing the leading letter "a" (nnotation, pproval, ssembly)	Correct as noted. Resolution: Current format in DIS is	

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					fixed and should be acceptable. Must have had older version of AP 232.	
SA – 31	Clause 5.1 Mapping table	Table 5 – Mapping table for data_definition _exchange	technical	In AP232, applied_effectivity_assignment may be used to specify either Configuration Effectivity or Product Definition Effectivity, whereas, PDM Schema (RPG) recommends using it to do ONLY "general validity period effectivity" (i.e, pre-planning effectivty). See PDMS RPG note on pg.209 Sec-14.2.1.1 for "Effectivity" under "related entities" sub-heading after Post-Processor recommendations.	Harmonize with the PDM Schema Resolution: AP232 needs this capability. Will add name attribute in ARM (already in AIM) that will help recognize the usage of this. The team should review the mapping. name attribute definition : The name specifies the label that the effectivty is known. NOTE The name could be used to assist in distinguishing between configuration effectivity and product definition effectivity. Request PDMS Usage guide change to not restrict this usage.	
SA – 32	Clause 5.1 Mapping table	Table 4 – Mapping table for common Table 5 – Mapping table for data_definition _exchange Table 8 – Mapping table for indentured_dat a_list Table 11 – Mapping table for parts_list	technical	Whenever parts or usage of parts need to be managed against a product-concept (or a variation of it), STEP associates it with Configuration Item (End-Item identification string) via the Configuration Design entity. Configuration Design relates a Product Version (PDF) to the Configuration Item. The interpretation of the relationship between the Configuration-Item and the Product-Version differs between AP232 and PDM Schema. In PDM Schema, the Product-Version (design) associated with the CI always represents the End-Item, whereas AP232 has two different interpretations based on how the Configuration Design entity is used. When the configuration design is referenced on a part usage relationship (e.g NAUO) as a Configuration_Effectivity, the Product-Version against the CI is interpreted to be the design of the End Item. In other	Harmonize with the PDM Schema Resolution: The team will review the RPG for any updates to clarify the difference usage/semantics. Clarification is that the different usages will be identified in the value found in the configuration_design.name attribute. The capability to associate a document to a configuration item without usage is an additional capability in AP232. Added to mapping table for configuration to product_configuration (end_item_system_designation) configuration_design.name='documentation configuration	

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				cases/contexts, when configuration design is NOT referenced via Configuration_Effectivity, the Product-Version is interpreted as "effective in the associated configuration item" (i.e, it is NOT the end item, but is used on it). There is an action item to amend the current AP232 RPG (v0.6) to elaborate or better clarify this 2-pronged interpretation, however, there is evidently a difference in the semantics of usage/interpreation between PDM Schema and AP232 all the same.	This was removed from table 5, 8, and 11 because Mapping table 4 is the common mapping table which applies to all other UoFs accept mapping table for presentation.	
SA – 33	General		minor technical	Currently, AP232 supports exchange of information pertaining to many different kinds of "products" indentured_data_list, parts_list, data_list, index_list, DDE, reference_document, product_data_set, etc). Currently, there is no Standards Recommendation on how the post-processors should/could unambiguously identify the information content of a given AP232 Part21 file. Currently, we parse the STEP file looking for the product_related_product_category value representing the defined product-types in AP232, but this is not a sure method to identify the top-level product. Since PDM Schema does not address "packaging" of information (unlike AP232), this is not an issue with PDMS.	Need to address in technical discussion. Resolution : Reject – this is an implementation question not an issue for AP232 document to address. The use of a DDE conformance class include with another conformance class or by itself in a part 21 file is a solution to this implementation issue. A document with its content is identified by a property_definition with the attribute name that has the word 'header' include in the string or by a product_definition with a context of product_definition_context.name ='XXX body' or 'XXX content'	
SA – 34	General		minor technical	Differing RPG recommendations for Document to Part relationships: PDM Schema RPG recommends relating all document-to-part associations using the applied_document_reference (ADR) entity. However, in AP232, different	Harmonize with the PDM Schema. Resolution: Rejected -→ The team will review the mappings to assure identification is on the document/part relationship entities.	

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				kinds of document-to-part relationships are represented using different AIM entities. For example, "reference document relationships" are mapped using ADR, Drawing-defining-Part relationship is probably represented using PDR (or its subtypes), etc. This probably makes more sense, because each AIM entity has specific semantics associated with it to better qualify the kind of relationship/information it represents. PDM Schema RPG seems to "bucket" all document-to-part relationships under ADR, which may cause difficulties in implementing a post-processor that aims to translate the common portions of PDM Schema and AP232 consistently the same way (especially when the assumption is PDM schema is a harmonized "core"/subset of AP232).	Differences here are AP232 extensions over and above the PDM schema	
SA – 35	General		minor technical	PDM Schema has support for all types of work-orders, i.e, Initiated, In-Work, Completed, On-Hold, Approved, etc, whereas, AP232 supports only "incorporated" (i.e, completed) Work Orders. Although there is always a status associated with the ECO (i.e, action_status entity), the AP conceptually supports only completed ECOs, and these ECOs are typically related to the incorporated Product Version (rolled rev). Normally AP232 would be expected to be the "superset" considering PDM Schema is a smaller subset (harmonized core), but it appears to be reversed. This again poses difficulties in post-processor implementation when interoperating Work Order related information between the two schemas.	Harmonize with the PDM Schema. Resolution: The requirement of superseded in the DDE and IDL conformance classes has included an additional optional mapping that shows work order AIM construct satisfying this requirement.	
SA – 36	General		minor technical	Guidelines for meeting requirements beyond scope of AP/Schema: When	Need to address in technical	

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				the AP/Schema or RPG does not address guidelines on meeting requirements above and beyond (but reasonably close to) the current scope of the AP/Schema, the implementation details to fulfil the new requirements may be potentially worked out thru exchange partner agreements which may not conform to AP interoperability standards. At the minimum, there should be some guidelines in the RPG on how to go about satisfying requirements above and beyond the scope of the AP/Schema (especially when it is a small harmonized core), such that implementations conform to AP interoperability standards and do not cause inconsistencies arising from making assumptions that may deviate from exchange standards. Specific examples of "new" requirements (there may be others) which have recommendations in AP232 but NOT in PDM Schema include: - Hanging/Outstanding Changes - DDE - Retrofitting Parts	discussion. Resolution: Reject → implementation issue. To be addressed in Recommended Usage Guide No changes In AP 232 document	
SA – 37	General		minor technical	Differences in Change Management Entities: PDM Schema has support for Work Requests (versioned_action_request, applied_action_request_assignmen t etc) and Work Orders (applied_action_assignment, directed_action, action_directive etc). However, AP232 has support only for Incorporated Work Orders. It lacks schema support for capturing Work Request information.	Harmonize with the PDM Schema. Resolution: Constructs in ballot comment will be incorporated based on solution to USA 36. The ability to identify Work Request through mapping of the data_definition_entry_item to element_identification (supersede_entry).	
SA – 38	General		minor technical	Differences in Measure With Unit related entities:	Harmonize with the PDM Schema.	

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				AP232 has measure_qualification and type_qualifier entities used to qualify and quantify the measure quantity. E.g. for unit EACH and quantity 1, measure_qualification = "quantity accuracy" and type_qualifier = "exact" is used to show how the measure qty is used. PDM Schema does not have support for these entities.	Resolution: Reject -→ Leave as is. Additional capability in AP 232 versus the PDM schema.	
SA – 39	General		minor technical	Classification of Properties, Approval & ActionStatus: AP232 has support for classifying Properties, Approval and action_status values which is commonly used to not just add semantics but also help in the proper identification as with Net Change information. The support is provided via the "group" and "classification" set of entities, which PDM Schema lacks.	Harmonize with the PDM Schema. Resolution: Reject. Additional capability in AP232 versus the PDM Schema.	
SA – 40	General		minor technical	Other entities/capability lacking in PDM Schema: assembly_component_usage_substitute_with_ranking: helps with identifying the prime/preferred part in a 2-way substitution product_definition_substitute: used to specify substitution when qty = 1. make_from_usage_option_with_reference_designator: helps identify individual occurrences of identical MakeFrom usages. property_definition_relationship: used when properties (esp. Notes) need to be sorted/sequenced in a particular order.	Harmonize with the PDM Schema. Resolution: Reject. Additional capability in AP232 versus the PDM Schema.	

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				product_relationship: very useful for alternate identification of a product process_product_association, product_definition_process: may be used to associate a business/user process to a product definition (not sure how useful it is).		
SA – 41	General		minor technical	Certification: Certification is required for supplied parts and/or documents. PDM Schema has support for this whereas AP232 lacks it.	Harmonize with the PDM Schema. Resolution: Certification will be added to support harmonization.	
SA – 42	General		minor technical	Time Interval Based Effectivity support: PDM Schema has support for this whereas AP232 lacks it. This is useful when defining either product-definition effectivity or general validity-period effectivity.	Harmonize with the PDM Schema. Resolution: Time Interval Effectivity support will be added to support harmonization.	
SA – 43	General		minor technical	General Property support: PDM Schema allows for general properties to be applied to parts/documents via the "general_property" entities whereas AP232 lacks this capability.	Harmonize with the PDM Schema. Resolution: General Property support will be added to support harmonization.	
SA – 44	General		minor technical	Digital Mockup Support: AP232 lacks support for one essential AIM entity "representation_relationship_ with_transformation" which is used in capturing 3D shape & transformation information for Digital Mockup.	Harmonize with the PDM Schema. Resolution: representation_relationship_with_transf ormation will be added to support harmonization.	
SA – 45	General		minor technical	Global RULE 'product_requires_version' is in PDM Schema but missing in AP232. Does this mean a Product can exist without a version?	Harmonize with the PDM Schema. Resolution: Will include if AP 203 and AP 214 has this rule. PDM Schema V4.2 does not include global rule 'product_requires_version'.	

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					AP 232 will not include this rule. Issue rejected.	
SA – 46	Clause 5.2.2.1.2		minor technical	action_item SELECT type configuration_effectivity in the PDM Schema but not in AP232.	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED to AP232	
SA – 47	General		minor technical	action_request_item TYPE exists in the PDM Schema but is missing in AP232.	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED to AP 232	
SA – 48	Clause 5.2.2.1.1		minor technical	approval_item SELECT types: applied_action_assignment, certification, versioned_action_request	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED to AP 232	
SA – 49	General		minor technical	certification_item TYPE exists in the PDM Schema but is missing in AP232.	Harmonize with the PDM Schema. Resolution: ADDED to AP 232	
SA – 50	Clause 5.2.2.1.4		minor technical	contract_item SELECT type action in the PDM Schema but is missing in AP232.	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED to AP 232	
SA – 51	Clause 5.2.2.1.5 Clause 5.2.2.1.6		minor technical	date_item & date_and_time_item SELECT types action, applied_action_assignment, applied_person_and_organization_assi gnment, applied_organization_assignment, approval_person_organization, certification, contract, organization_project, security_classification, versioned_action_request are in the PDM Schema but are missing in	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED all but applied_person_and_organization_assi gnment, applied_organization_assignment, Resquesting that these two be removed from the PDM Schema express.	

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				AP232.	Being worked as part of PDM Schema resolution at TAC meeting In October 2001.	
SA – 52	Clause 5.2.2.1.7		minor technical	document_reference_item SELECT types action_method and versioned_action_request are in the PDM Schema but are missing in AP232.	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED to AP 232	
SA – 53	Clause 5.2.2.1.13		minor technical	identification_item SELECT type product_definition_formation exists in the PDM Schema but is missing in AP232.	Harmonize with the PDM Schema. Resolution: Look at GOS –1 for resolution. ADDED to AP 232	
SA – 54	General		minor technical	role_select SELECT type certification_assignment exists in the PDM Schema but is missing in AP232.	Harmonize with the PDM Schema. Resolution: ADDED to AP 232	
SA – 55	General		major technical	PDM Schema harmonization – AP232 and the PDM Schema are not interchangeable	Harmonize with the PDM Schema. Resolution: Rejected → This addresses a bi-directional translation capability of the intersection between AP232 and the PDM Schema. This needs to be resolved in a modular harmonization effort between AP232 and the PDM Schema. This will be accomplished at a great degree. AP 232processor should be able to read a PDM Schema file but a PDM Schema processor probably will not be able to handle all AP 232 files. Made change to AP 232 so that PDM Schema express is a proper subset of AP 232. Example removed document_usage_constraint_item and now replaced its usage in applied_document_usage_constraint_a	

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					ssignment with document_item. Added event_occurrence_item to AP 232 support harmonization. Removed group_item from AP 232 to support harmonization.	
SA – 56	General		major technical	AP232 needs to be modularized	Develop AP232 modules. Resolution: Rejected for first edition of AP 232 - To be addressed at a later date. Review PDM related Modules to try to ensure all PDM Module requirements are captured in AP 232. Need long form of PDM Modules to confirm this.	
SA – 57	Clause 5.1: Mapping Table	Table-4: Mapping Table for Common: Configuration to Product_Configuration, cases #1 & #2	minor technical	To satisfy the usage context requirement for Configuration to Product_Configuration relationship, the mapping table suggests the item to be the ".related" in a PDR relationship. There may be business scenarios which would require the item to be ".relating" as well. Hence the mapping table needs to be a bit more "flexible" in allowing the item to be either ".relating" or ".related" in the required usage context.	Change the wording or mapping in the "Reference Path" column of the mapping table to allow the item to participate as either ".relating" or ".related" in the PDR relationship which identifies the usage context for the configuration. Resolution: Added option in mapping table with comments describing options,	
SA – 58	Clause 4.2.13.2: change_code	Reformat 4.2.12.2.1-5	editorial	Reformat . start definition below sub-section number.	Incorporate comment Resolution: Incorporate comment	
SA – 59	Clause 5.1 Mapping Table	Table 4 common table alternate_element_identification to design_authority	editorial	Global rule document_requires_person_organization is not needed because this rule is already covered by the global rule product_requires_person_organization Related to issue USA – 65	Change mapping note to 25 Resolution: Change mapping note to 25	

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SA – 60	Clause 5.1 Mapping Table	Table 4 common table element_identi fication to design_authori ty	editorial	Global rule document_requires_person_organizatio n is not needed because this rule is already covered by the global rule product_requires_person_organization Related to issue USA – 65	Change mapping note to 25 Resolution: Change mapping note to 25	
SA – 61	Clause 5.1 and 5.2.4.x	Table 1-14	editorial	Renumber mapping table numbers based on deleation or addition of rules	Renumber rulesl Resolution: Renumber rules	
SA - 62	Clause 5.2.1.1	Third Paragraph	editorial	Remove the constraint that requires the entities document_product_equivalence, document, and document_type to always be instantiated when a product entity is used to represent the concept of a document. This is a harmonization agreement between AP 232 and AP 214. The only time those three entities are needed is when a relationhsip between a document and something other business object is required. (Using a document_reference or a document_usage_constraint)	Remove these three entities from the third paragraph. Resolution: Incorporate proposed solution.	
SA – 63	Clause 5.2.4.5 Contract_sub mission_requir es_date_and_ organization	Express specification	minor technical	The logic to require an organization for a contract_submission was left out of the rule.	Include additional express to cover the organization constraint requirement. Resolution: Incorporate proposed solution.	
SA - 64	Clause 5.2.4.11 document_pro duct_equivalen ce_existence_r ule	Express specification	minor technical	The logic to that checks that the association of a document_usage_constraint with a document_product_equivalence (indirectly in the existance path) is a valid instantiation of a document_usage_constraint is not in the express rule.	Include additional express to cover the existance of document_usage_constraint in lue of document_reference in the rule. Both document_usage_constraint and document_reference need to be covered in rule. Resolution: Incorporate proposed solution.	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
SA - 65	5.2.4.12 document_req uires_person_ organization		minor techicial	Global rule document_requires_person_organizatio n is not needed because this rule is already covered by the global rule product_requires_person_organization Related to issue USA – 59 and 60	Delete rule document_requires_person_organizatio n Resolution: Incorporated proposed solution.	
SA - 66	5.2.4.18 identification_ of_sheet_cons traint	Last sentence	editorial	Change "be use instead" to "be used instead"	Resolution: Incorporate comment	
SA -67	5.2.4.20 indentured_lev el_tag_identific ation_constrai nt	Express specification and Formal propositions	minor technical	String names do not match up between express and the formal proposition text. 'dde entry property' 'idl entry property' in express and 'exchange entry property' and 'indentured data list entry property' in Formal proposition.	change string in express to the ones in the formal proposition. Resolution: Incorporate proposed solution.	
SA - 68	5.2.4.23 notation_type_ identification_c onstraint	Express specification	minor technical	Logic in rule missing step that initial sets the rule to true if no notes are present in the exchange.	Add logic to rule. Resolution: Incorporate proposed solution.	
SA - 69	6.14 Product data set (PDS)	Table 16 Conformance class elements	editiorial	Conformance class one (Data definition exchange for files) should not have AIM elements assembly_component_usage and asembly coomponent usage_substitute within itself.	Remove both AIM constructs from Conformance class 1. Resolution: Incorporate proposed solution.	
SA - 70	6.14 Product data set (PDS)	Table 16 Conformance class elements	editiorial	Make effectivity_relationship match the conformance classes that effectivity is valid in.	Remove effectivity_relationship from conformance classes 1, 2, 5, 7, 8, 10, and 11. Resolution: Incorporate proposed solution.	
SA - 71	6.14 Product data set (PDS)	Table 16 Conformance class elements	editiorial	Make electric_current_unit match the conformance classes that electric_current_measure_with_unit is valid in.	Add electric_current_unit to conformance classes 1, 2, 5, 7, 8, 10, and 11.	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					Resolution: Incorporate proposed solution.	
SA - 72	Annex A		minor technical	AIC 507, 508, and 509 have been moved to IS status since AP 232 DIS ballot has been out. Need to use updated AICs .	Regenerate short form with new IS's of AIC 507, 508, and 509. (and updated rules) Resolution: Incorporate proposed solution. Got new express from SC4/WG12 Convenor.	
SA - 73	Annex K	K.5.1.4.4.1 Last bullet	editorial	Electronic signature is referenced at being looked at being included. Electronic signatures are being address by other standards. STEP does not need to address.	Remove electronic signature bullet. Resolution: Incorporate proposed solution.	
SA –74	Clause 5.1 Mapping table	Table 4 – Mapping table for common, Configuration to Product_config uration (end_item_sys tem_designati on)	minor technical	Mapping option #3 should additionally constrain the configuration_design to indicate the document context and the absence of a usage context for the configuration item.	Add to the Reference Path for option #3 a requirement for a name_attribute related to the configuration_design with the value for the attribute specified as "documentation configuration". Resolution: Incorporate proposed solution.	
SA - 75	Clause 5.1 Mapping table	Table 4 – Mapping table for common, Item to Configuration (item_configur ation)	minor technical	The property_definition that maps the Configuration lacks identification.	Add to the reference path a constraint such as {property_definition.description = 'item configuration'}. (This is similar to the constraint specified in the mapping for Indentured_data_list_entry to Configuration.) Resolution: Incorporate proposed solution.	
ER-1	5.2		MAJOR, TECHNICAL	There are major differences between the common SELECT types of AP232 and the PDM schema. Several select types are missing some elements that	Check with PDM schema V1.2 and add the missing elements. Resolution: See GOS-1 for resolution	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				have counterparts in the PDM schema. E.g. in approval_item, contract_item, date_and_time_item, ...		
ER-2	5.2.3.1.8		MAJOR, TECHNICAL	Entity applied_document_usage_constraint_a ssignment is different from the same entity defined in the PDM schema.	Use the PDM schema EXPRESS definition. Resolution: Change to as in PDM Schema	
ER-3	5.2.4		MAJOR, TECHNICAL	The following rules defined in the PDM schema are missing: - product_requires_category - product_requires_version	Add the missing rules Resolution: Will add if rules are both in AP 203 and AP 214. Incorporated – product_requires_category product_requires_version	
ER-4	5.1		MAJOR, TECHNICAL	The PDM schema and other APs like AP214 or AP203 handle part lists in the way that the AIM entity assembly_component_usage (or on of its subtypes) relates the product_definition of the assembly with the product_definition of the component. AP232 introduces another level of product_definition: assembly_component_usage relates the product_definition of the component with a product_definition representing an Item_list. This product_definition is related with the product_definition of the Assembly (Item) by an additional product_definition_relationship with name = 'parts tabulation'. This will cause a severe interoperability problem.	Map part lists in the same way as described in PDM schema / AP214 / AP203 Resolution: see GOS-2 for solution.	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
ER-5	6		MAJOR, TECHNICAL	Annex C describes scenarios of interoperation with ISO 10303-201 and 10303-202. However, it is not clear how this interoperation really works. The AP232 AIM contains presentation and draughting entities copied from 201/202 AIM. In a Part21 file, are there multiple data sections? Are there sections shared between Ap232 and 201/202? How do the C.2.x scenarios relate to the "Draughting" Conformances classes of AP232 (CC 10, 11, 13 and 14)?	Either explain the interoperation in annex C or remove Conformance Classes 12, 13 and 14. Resolution: Added to Annex C.2.x to clarify usage. See GOS-9 for resolution.	
ER-6	Annex C.2		MAJOR, TECHNICAL	Annex C describes scenarios of interoperation with ISO 10303-201 and 10303-202. However, it is not clear how this interoperation really works. The AP232 AIM contains presentation and draughting entities copied from 201/202 AIM. In a Part21 file, are there multiple data sections? Are there sections shared between Ap232 and 201/202? How do the C.2.x scenarios relate to the "Draughting" Conformances classes of AP232 (CC 10, 11, 13 and 14)?	Clarify annex C.2 or remove this subclause. Resolution: Added to Annex C.2.x to clarify usage. See GOS-9 for resolution.	
PN-1	4.2.13.2 4.2.144.1		Minor, Technical	In the ARM schema, following ENUMERATIONs have confliciting name in global scope. The name of revision and sheet are also used as a	Propose solution is to change the member revision to complete_revision, and change the member sheet to sheet_material.	

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Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				name of Entity in this schema. TYPE change_code =ENUMERATION OF (change, original, original_with_change, other, revision, revision_with_change); END_TYPE; TYPE stock_catelog = ENUMBERATION OF (bas, plate, sheet, pipe, tube, block, sphere, roll); END_TYPE;	Resolution: Incorporated proposed solution.	
PN-2	4.2.110		Minor, Technical	The ARM entity person_and_organization in page 162 is as follows, but it has another attribute of 'electronic_mail_address' both in Mapping table page 307 and Figure 17 page 1035. ENTITY person_and_organization; organization : OPTIONAL company; person_identification : OPTIONAL person: person_address : OPTIONAL text; WHERE WR1: EXISTS(organization) OR EXISTS (person_identification): END_ENTITY;	Resolution: Update express definition to make consistent .	
OS-1	Annex A	Select Types		The following differences have been found between the SELECT types defined in the PDM schema v1.2 and the same SELECT types defined in AP232. While some differences are justified by the difference in scope, some others are not. Table B at end of Issues contain list of differences.	Reduce as far as possible the differences. Resolution: Resolution to each is in Table C at the end of the Issues . GAZ Only three outstanding select type members organization_item (approval)	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					date_and_time_item(applied_person_and_organization_assi gnment, applied_organization_assignment) date_time (applied_person_and_organization_ass ignment, applied_organization_assignment)	
OS-2	5.1			The description of a part list is quite different in AP232 from the way it is done in AP203/AP212/AP214. In AP232, it is done as follows: (Look a Figure 1 below after issues.) Whereas, in the other APs, the assembly_component_usage or one of its subtypes relate directly the product_definition of the assembly with the product_definition of the component. Therefore, an AP203/AP214/PDM schema based processor will not understand the assembly_component_usage written by an AP232 processor. This is presently a major point of non-interoperability. NB: discussions with the project leader have shown that the appearent inconsistency may only be caused by a lack of documentation.	PROPOSED SOLUTION: Make explicit in clause 4.2 that an item list shall be considered as a particular definition of an assembly. Map assemblies in AP232 as they are mapped within AP203/AP214/PDM schema. I.e.: in AP214, an assembly definition is mapped onto a product_definition that: - has for frame_of_reference, a product_definition_context with name 'part definition' - is referred to by a product_definition_context_associa tion pointing to a product_definition_context with name 'assembly_definition' NB: keep the other product_definition_context_association, pointing to a product_definition_context with name 'item list' Make explicit these required encodings in the mapping-table and in clause 5.2.1 . Clarify, similarly, the mapping of other list objects of AP232.	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					Resolution:	
					Below are the changes to the AP 232 document based on the proposed solution above.	
					Summary of changes:	
					Updated definition of 4.2.10 Assembly and change object name to Assembly_relationship	
					Added subtypes of Assembly_relationship to refine mapping. These subtypes follow requirements found in the Part_occurrence and Part_structure module. The subtypes of Assembly_relationship to be added to the ARM are Part_occurrence_in_assembly, Specified_part_in_assembly_tree, Promisory_usage, and Quantified_part_usage_in_assembly.	
					Added examples to Item_list to show different usages of this object.	
					Added string constraints 'part definition' and 'assembly definition' constraints in reference path for Assembly.	
					Added additional text in section 5.2.1.3 Parts List to specify the different types of context on Item_list (product_definition).	
OS-3	Clause 5			In its mappings, the AP makes a confusion between the concept of product and the concept of "reference to the product in a document" (e.g. in a	PROPOSED SOLUTION: Each reference to a product in a document should not be mapped using product_definition but using	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				part list). Such a reference that is in practice a set of alphanumerical characters on a page should not be considered as a definition of a product but only as a representation of (a definition of) the product.	representation or representation_item. Resolution: No change to document because : The product_definition can have multiple context. The primary context is supplied by using the product_definition.frame_of_reference attribute. A secondary context such as an item_list in the context of a parts list can provide a view that can be used to identify a section of a parts list document.	
OS-4	Annex G		Editorial	Express-G diagrams do use the right line width for supertype/subtype relationships (shame on the DIS' editor and DIS' checker).	Make Express-G diagrams conform to ISO + SC4 editorial directives. Resolution: Redraw diagrams using new tool and larger font lines and text.	
OS-5	5.1			The AIM is not equivalent to the ARM, as regards the mapping of the application object effectivity. (Look at Figure 2 below the issues list graphical explanation) The mapping of the object Effectivity onto configuration_effectivity involves that an instance of configuration_design be created. This instance shall refer to a configuration_design_item. But the ARM does not require that a Product_configuration be associated to an object mapped as product_definition_formation or product_definition. Therefore, the way to instantiate configuration_design.design is	Enforce any Product_configuration to be associated with a corresponding part version, or, do not map Effectivity with configuration_effectivity but using effectivity_assignment and effectivity_context_assignment. Resolution: Add attribute to ARM object Product_configuration named design_item. The following are the additions to the ARM and mapping table. Additions to section 4.2.111 Product_configuration Add attribute design_item to attribute list	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				unknown.	Add following line to ARM express specification design_item : item_identification; Add the following attribute definition 4.2.111.2 design_item Design_item specifies the identification of the item that has been designated as a configuration item. Add assertion: 4.33.XX Product_configuration to Item_identification Each Product_configuration has design_item defined by zero or one Item_identification object. Each Item_identification defines design_item for exactly one Product_configuration object. Add entry in to Common mapping table: Product_configuration to item_identifcaiton (design_item) configuration_item<- configuration_design.configuration configuration_design configuration_design..design-> configuration_design_item configuration_design_item=product_def inition_formation product_definition_formation	
OS-6	5.1		Major, Technical	The last line of the reference path of the mapping of alternate_element_identification to design_authority does not conform to the mapping syntax	Make the reference path conform to the mapping syntax Resolution: The last line of the ref. path is: (organization_ role. name=('id	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					owner')(' creator'))}) Change to: ({organization_ role. name= 'id owner'}) ({organization_ role. name= ' creator'}) Went through all mapping table and fixed format.	
OS-7	5.1		Major, Technical	The mapping of this A.O. is not the translation of the definition found in clause 4.2.4. It is mapped as an alternate product (definition_formation) whereas the definition of element_identification.alternate_identifi cation defines the concept as an alternate way to identify the same product. Besides, if it is really an alternate product, then the object alternate_element_identification is not needed and you only need to create a relationship (of type "alternate") between two element_identification. If the ARM concept means "alternate identifier", then the entity identification_assignment should be used with specialization to map the concept.	Rework the definition of the application object and its mapping. Resolution: The meaning of an Alternate_element_identification is not an alternate product or substitution. Alternate_element_identification allows a set of product information (document) to be initially created and managed in some other organization/company and then managed in other organization/company using a different set of identification information. An example might be a material specification from one company is used in a second company and its system might have its own naming convention and classification structure. This second company may change its identification so it would work with in a particular software application. This software application is comparable to a company taking a supplier's part and identifying it with their own name and identification information. This second identification would need to be managed and controlled. Will add a note and example to section	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					4.2.4 that states the above information for an Alternate_element_identification.. Will also add similar note and example to section 4.2.5 that state the above information for an Alternate_identification_of_item. They would be: NOTE Alternate_identification_of_item allows an item (part) to be initially created and managed in some other organization/company and then managed in other organization/company using a different set of identification information. EXAMPLE A part from one company (supplier) is used in other company but the second company (assembly manufacture) may change its identification so information would work with in a particular software application. This software application/system might have its own naming convention and classification structure. This second identification would need to be managed and controlled.	
OS-8	5.1	Element_identi fication	Major, Technical	Two paths are proposed (with the notational convention < …>). But there is no other information for choosing the right path.	Use the notation #1, #2 … with an explanation of each mapping case Resolution: First are the new #1 and #2 notation and then the reference path is shown with the labels #1 and #2 identified. #1 This constraint is always applied for an Element_identification*	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					#2 This constraint is only used when a document_reference or a document_usage_constraint is to be associated with an Element_identification (product_definition_formation) *** #1 {product_ definition_ formation product_ definition_ formation. of_ product-> product< - product_ related_ product_ category. products product_ related_ product_ category<= product_ category product_ category. name= 'document'} #2 <{ product_ definition_ formation product_ or_ formation_ or_ definition= product_ definition_ formation product_ or_ formation_ or_ definition< - document_ product_ association. related_ product document_ product_ association document_ product_ association. name= 'equivalence'} {product_ definition_ formation product_ or_ formation_ or_ definition= product_ definition_ formation product_ or_ formation_ or_ definition< - document_ product_ association. related_ product document_ product_ association document_ product_ association. relating_ document-> document document. kind-> document_ type* document_ type. product_ data_ type= 'configuration controlled document version'}>	
OS-9	Annex-c.2		Major, Technical	This clause envisions implementation of the AIM with or without ISO 10303-201 and ISO 10303-202. But the way to implement the AIM with other APs is not clear. What does it mean: do you envision several data sections in a file, each one being based	Remove the implementation cases "with AP201 or 202" or clarify what it means, responding to the questions above. Resolution:	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				on an AIM? one data section being based on an Express schema that merges all the AIM schemas? several STEP files, each based on an AP, with references between them? Why to envision these implementation cases whereas the AIM include drafting and graphical presentation entities? What is the relationship between these implementation cases and the conformance classes of the AP?	_____ begin insert into AP document in Annex C.2 _____ The capability this part of ISO 10303 will provide is to allow a drawing and its sheets to be identified just like other Tdp_elements are so they can be managed and interpreted as configuration controlled objects in product data management systems. ISO 10303-201 and ISO 10303-202 represent drawings and sheets as presentations. This part of ISO 10303 will contain a portion of the same constructs as in ISO 10303-201 and ISO 10303-202 so that the identification of the drawing (draughting_drawing_revision) and sheets (drawing_sheet_revision) in ISO 10303-201 and ISO 10303-202 can be associated to the configuration controlled identification of a drawing and sheet (product_definition_formation) in this part of ISO 10303. Figure C.2 and Figure C.3 show these common constructs that are shared by this part of ISO 10303, ISO 10303-201, and ISO 10303-202. This capability could be implemented with each part of ISO 10303 (application protocol) contained in its own physical file or contained in a multi-schema physical file. In separate physical files the constructs in Figures C.2 and C.3 would be captured in each file. In one physical file the constructs in Figures C.2 and C.3 would only have to reside once. The following sub clauses identify different implementation examples.	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					_____ end insert into AP document _____	
OS-10	Clause 6		Major, Technical	There are too many conformance classes for implementors and for end-users that will have to select the right conformance classes (it is already difficult for them to identify the right AP, so finding out the right CC for exchange is even more problematic).	Reduce the number of conformance classes, merging all the ones dealing with lists in a single one, and all the one covering presentation/drafting aspects in a single one. Resolution: No change in the number of conformance classes. These conformance classes can be combined to support a particular need.	
OS-11	Clause 6		Major, Technical	Conformance class 12 (idem for CC13 and CC14) are not satisfactory and misleading. Exchange on geometric models is only useful if you can exchange the representation of components positioned within an assembly. But the AP does not provide this capability as there is no way to associate a placement information to an assembly relationship. In addition, other APs, already IS (203, 214), provide already all the entities needed to exchange geometric models and digital mockups (= assembly trees with internal or external geometric models for each component).	Remove conformance classes CC12, CC13 and CC14 Resolution: Conformance Class 12, 13, and 14 do serve a useful purpose. They support the exchange of geometry in which its configuration is not managed from a single part's perspective. Add text and example below to CC12 definition to make this clear in the AP document. ---- begin insert into AP document ---- This conformance class allows geometry models to be managed from a document perspective. EXAMPLE One or more lofting surfaces of an airplane. NOTE The lofting surface of a product is usually a collection of surfaces that define the outside target shape of a product. This collection of surfaces are used as the initial / founding shape of the overall airplane.	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
					Each mathematical surface in the group can span multiple parts or span only a portion of a part's shape. These groups of surfaces are managed and configured as single units, independent of any single part or assembly. Relationships between parts and these groups of surfaces can be instantiated identifying primary surface requirements for the parts. ___ end insert into AP document __ Therefore the need of these conformance classes are justified.	
OS-12	Clause 5.1			The mapping-table contains several times, in the reference path, alternate options presented in the same line (see, for example, the ref. path of "sheet to label (sheet_size)" and the options for representation_item.name). Such a way to represent alternate options is not conforming to the SC4 editorial directives.	Conform to SC4 directives. Resolution: Change multiple OPTIONAL ( ) ( ) on same line to be on separate lines	
OS-13	Cover Page			I am quite disappointed by the text in the section "Comment to readers" on the first page. I hope it only needs to be updated but you should not have built this DIS with the DIS versions of the IRs but using the 2nd edition of ISO 10303- 41, 42, 43 and 44.	Build the AIM schema using the latest (=2nd) edition of IR parts. Resolution: Rewrite "Comment to Reader" section	
OS-14	Cover Page			Reading the definition of indentured_list_by_part, a part_list seems to be equivalent to a indentured_list_by_part that has only one level of indenture. So, why are there two application objects? Or why	Simplify the model, replacing the object part_list by the use of indentured_list_by_part (with one level). Resolution:	

Member body	Clause/ subclause	Paragraph/ Figure/Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				part_list is not a subtype of indentured_list_by_part?	A parts_list and Indentured_data_list do have some similar features but the structure of the parts_lists only allows tabulations of parts. The Indentured_data_list with the option of indentured_lsit_by_part also includes documents to be included in the tabulation / relationship tree. Leave both as-is.	

Table – B Differences in Select types between AP 232DIS and the PDM Schema V1.2 (reflecting harmonization with AP 203 and AP 214)

ELECT Type	In addition in AP232 AIM	Not existing in AP232 AIM
ction_item	document_file, property_definition, representation	configuration_effectivity
ction_request_item		product_definition, product_definition_formation, product_definition_relationship, property_definition
pproval_item	applied_effectivity_assignment, configuration_item, document_file, property_definition,	action, applied_action_assignment, certification, product_definition_relationship, versioned_action_request
pproved_item	drawing_revision, drawing_sheet_revision	
lassification_item	action_status, approval, descriptive_representation_item	
ontract_item	executed_action, product_definition, product_definition_with_associated_documents, property_definition	
ontracted_item	drawing_revision	
ate_and_time_item	applied_contract_assignment,	action,

	applied_security_classification_assignment, executed_action,	applied_action_assignment, applied_person_and_organization_assignment, applied_organization_assignment, approval_person_organization, certification, contract, organizational_project, security_classification, versioned_action_request
ate_item	applied_contract_assignment, applied_security_classification_assignment, executed_action,	action, applied_action_assignment, applied_person_and_organization_assignment, applied_organization_assignment, approval_person_organization, certification, contract, organizational_project, security_classification, versioned_action_request
ocument_reference_item	alternate_product_relationship, applied_document_reference, assembly_component_usage_substitute_with_ranking, descriptive_representation_item, document_file, executed_action, externally_defined_symbol_and_placement, make_from_usage_option, make_from_usage_option_with_reference_designator, product, product_definition_formation, product_definition_occurrence_relationship, property_definition,	action_method, product_definition_formation_relationship, versioned_action_request
ocument_usage_constraint_item	alternate_product_relationship, applied_document_reference, assembly_component_usage_substitute_with_ranking, document_file, executed_action, externally_defined_symbol_and_placement, make_from_usage_option, make_from_usage_option_with_reference_designator, next_assembly_usage_occurrence, product, product_definition, product_definition_formation, product_definition_formation_relationship,	

	product_definition_occurrence_relationship, product_definition_relationship, product_definition_with_associated_documents, promissory_usage_occurrence, property_definition, quantified_assembly_component_usage, shape_aspect, shape_aspect_relationship, specified_higher_usage_occurrence	
ffectivity_context_item	organization, product_definition_formation	
roup_item	action_status, approval, descriptive_representation_item	
dentification_item	application_context, document,	approval_status, product_definition_formation, shape_aspect_relationship
anguage_item	product, product_definition, product_definition_formation, document_file	
rganization_item	applied_contract_assignment,	approval, security_classification, versioned_action_request
rganizational_project_item	action, applied_action_assignment, applied_contract_assignment, applied_identification_assignment, configuration_item, contract, document_file, product, product_definition, product_definition_formation	executed_action, product_concept
erson_and_organization_item	applied_contract_assignment, applied_identification_assignment	product_definition_formation, security_classification, versioned_action_request
epresented_definition	property_definition_relationship	general_property
ole_select	action_assignment, approval_assignment, group_assignment	certification_assignment
ecurity_classification_item	property_definition	document_file
upported_item		action_directive

Figure 1 - In support of GOS – 2 ballot comment description.

Item_usage / locally_defined_item / assembly

Item_list

'parts list body' —— description —— *Parts_list_body*

relating_product_definition —— pd

assembly_component_usage —— relating_product_definition —— product_definition —— related_product_definition —— product_definition_relationship —— name —— 'parts tabulation'

related_product_definition

description —— 'item_usage'

definition

aplication_context_element —— name —— 'item_list'

product_definition_context_association —— frame_of_reference —— pd_context

'locally defined'

product_definition

formation

related_product_definition —— product_definition_relationship —— relating_product_definition —— pd —— formation —— pdf

pdf

of_product

product

Item component

product_category_relationship —— category —— product_category —— name —— 'document'

of_product

sub_category

product_related_product_category —— products S [1:?] —— product

product_category —— name —— 'drawing'

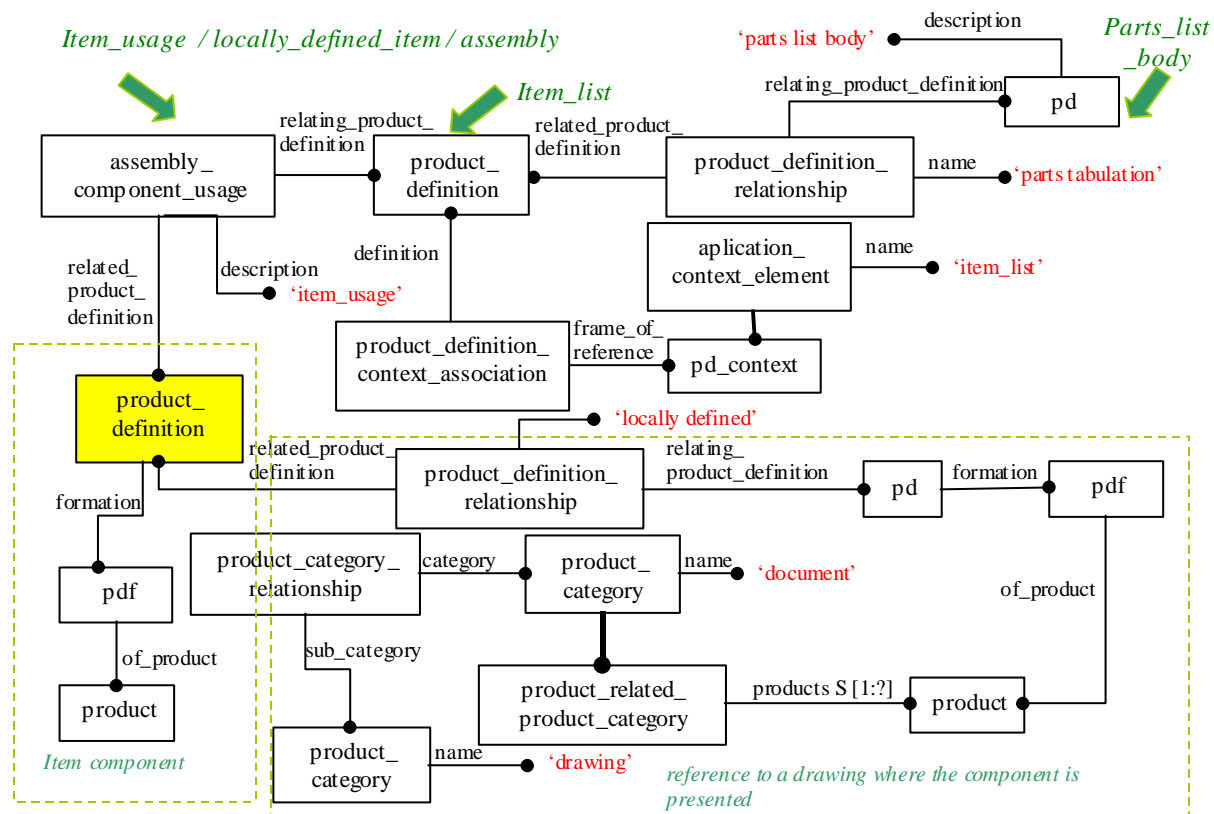*reference to a drawing where the component is presented*

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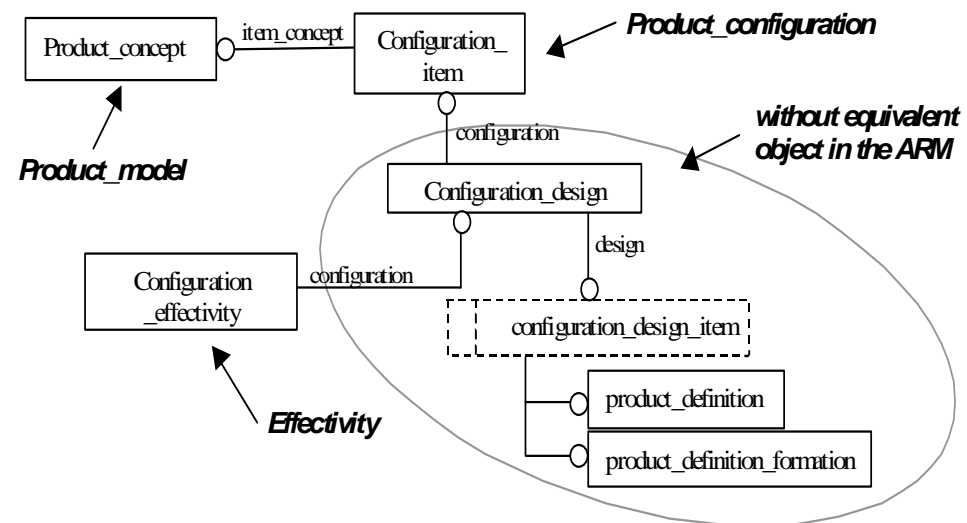Figure 2 - In support of GOS – 5 ballot comment description.

Table C - Resolution and Open Issues to Select Type difference between PDM schema and AP 232

ISSUE NUMBER: GOS-1
ORIGINATOR: P. Huau,GOSET,pascalhuau@compuserve.com
SENTENCE/ABSTRACT/KEYWORD:
DESCRIPTION:
The following differences have been found between the SELECT types defined in the PDM schema v1.2 and the same SELECT types defined in AP232.

SELECT Type	In addition in AP232 AIM	Not existing in AP232 AIM

Action_item	`document_file, property_definition, representation`
	
	`*******************`
	A document_file uses an action to provide change identification
	
	Property_definition should be removed from action_item select type.
	
	Representation uses an action to capture file format change and revision level.
		`configuration_effectivity`
		
		`******************`
		`configuration_effectivity`
		
		When configuration_effectivity plays the role of a manufacturing configuration in AP 214 it may have a retention period associated to itself through an action_item. In AP 214 **action** is subtyped as **retention** . Since the PDM Schema does not have the entity retention this does not provide justification for configuration_effectivity to be a member of the select type action_item.
		
		AP 214 also has a generic requirement of Activity which identifies its Activity_elements. The Activity has many types of Activity_elements that make up the Activity. One of these Activity_elements is Manufacturing_configuration. Manufacturing_configuration maps to configuration_effectivity.
		
		The list of all the AIM entities that

		play a role as an Activity_element in AP 214 are the following : product_definition_formation, product_definition, product_definition_relationship, product, action_method, alternate_product_relationship, assembly_component_usage_substitute, product_concept_feature_category_uasge , product_concept_feature_association, configuration_design, configured_effectivity_assignment, document_file, drawing_revision, shape_aspect, shape_representation, product_definition_substitution, property_definition, configuration_effectivity, action, product_concept, configuration_item, general_property, action_property, resourse_property, product_concept_feature, product_concept_feature_category, draughting_model, mechanical_design_geometric_presentati on_representation, presentation_area. In the PDM Module 'Work_Order' the scope of its application object 'Activity' only includes a particular version, view definition, or occurrence of a part to satisfy : items which are produced by the Activity as a result of the adopted solution procedure. This

		requirement corresponds to the three action_item select type members, (product_definition_formation, product_definition, and product_definition_relationship). The requirement for configuration_effectivity to be a member of the action_item select type is not present in the PDM Schema Usage Guide or any of the other activity_elements from AP 214. . ```In the PDM usage guide text there is no specific requirement for a relationship between an action (Activity) and a configuration_effectivity (Manufacturing configuration) Section 15.2.1.3 in the PDM Usage Guide shows the requirements for being a member of the action_item select type. Within the scope of the PDM schema only PDFs, PDs, and PDRs are valid.``` Recommendation : Remove configuration_effectivity from being a member of the select type action_item, since this is not in scope of the PDM modules, PDM Schema Usage Guide, AP 203 second edition and AP 232. It only seem to be a requirement in the scope of AP 214. configuration_effectivity was added to the select type action_item in the last point release of the PDM Schema. (version 1.2)

Action_request_ite m		```product_definition, product_definition_formation, product_definition_relationship, property_definition```
		
		```*************```
		
		Action request_item has now been included in AP 232 as part of the mapping to satisfy the requirment

		of identifying the superseded part or document in an indentured_data_list_entry, data_definition_entry_tdp_element, or data_definition_entry_item. Theses mappings include action_request_item with select type members product_definition, product_definition_formation, and product_definition_relationship being valid. Property_definition is not included as a member in action_request_item in this context in AP 232. **** property_definition ***** In AP 214, when property_definition plays the role of kinimatic_simulation_information or property_value_association it can be referenced by an action_request_item playing the role of a work request. In AP 214 a work_request has a scope. The scope specifies the objects that are subject to the work_request. There are 44 different types of scope. `In  the  PDM Module 'Work_Request' the affected_items  of   its   application object 'Work_request'  only includes` a particular version, view definition, or occurrence of a part. This requirement corresponds to the three action_request_item select type members, (product_definition_formation, product_definition, and product_definition_relationship). The requirement for property_definition to be a member of the action_request_item select type is not present or any of the other activity_elements from AP 214. . `In  the  PDM usage guide text there is`

		no specific requirement for a relationship between an action_version_request (Work_request) and a property_definition (Кinimatic_simulation_information or Property_value_association) Section 15.1.1.3 in the PDM Usage Guide shows the requirements for being a member of the action_request_item select type. And it states that within the scope of the PDM schema only PDFs, PDs, and PDRs are valid. Recommendation : Remove property_definition from being a member of the select type action_request_item, since this is not in scope of the PDM modules, PDM Schema Usage Guide, AP 203 second edition and AP 232. It only seem to be a requirement in the scope of AP 214. property_definition was added to the select type action_request_item in the last point release of the PDM Schema. (version 1.2)
Approval_item	applied_effectivity_assig nment, configuration_item, document_file, property_definition, **************************** ** applied_effectivity_assignment ** used to approve an effectivity that the next higher level assembly is not known.	action, applied_action_assignment, certification, product_definition_relationship, versioned_action_request ------------------------------------ *** action **** the entity action is a member of the select type approval_item in AP 232. ****************** applied_action_assignment ****************** In AP214 the applied_action_assignment

		** configuration_item ** used to approve the establishment of an configuration item within a project. ** document_file ** used to discribe a distribution notice ** property_definition ** used to approve release authenticiation, and data usage rights	is an activity element. In the PDM Schema, based on the Usage Guide, can not find requirement for Activity_element. In AP 232, added approval as one of the members of the ARM select type 'revision_authorization_select'. Its mapping provides applied_action_assignment as a member of approval_item. ** certification ** certification is now included in scope for AP 232. Approval is one of certifications attributes. In PDM Schema Usage Guide did not find requirement (text) for certification being a member of the select type approval_item. ************ product_definition_relationship (PDR) ******** In AP 232, completed list_item_usage to include approvals. AP 214 an approval is applied to an Item_ definition_instance_relationship. In PDM Schema did not find requirement (text) for PDR being a member of the select type approval_item. ** versioned_action_request ** In AP 232, an approval applied to a Versoned_action_request is now included in the mapping for superseded entry in a Data_definition_exchange or an Indentured_data_list.

		Recommendation : No changes needed to PDM Schema. All approval_item select type members are included in AP 232.
Approved_item	drawing_revision, drawing_sheet_revision ******************* In AP 232 to harmonize with AP 202	

Classification_item	action_status,
	approval,
	descriptive_representatio n_item
	
	********************
	AP 232 needs classifications for :
	  - Different types of status' for actions (action_status) ;
	  - Different types of distribution_codes for a distribution_notice
	  - Different types of reference_codes and categories for notation.	

Contract_item	executed_action, product_definition, product_definition_with_a ssociated_documents, property_definition ******************* executed_action allows change_identification information to be	

	associated with a contract. AP 232 allows a representation of a document (PD and PDWAD) to be associated with a specific contract. Need to remove property_definition from select type	
Contracted_item	drawing_revision ***************** In AP 232 to harmonize with AP 202	
Date_and_time_ite m	applied_contract_assignme nt, applied_security_classifi cation_assignment, executed_action, @@@@@@@@@@@@@@@@ ***************************** applied_contract_assignment ***************************** date_and_time applied to applied_contract_assignment provides the date the items in the contract_item select type where submitted under this contract. ***************************** applied_security_classification ***************************** date_and_time applied to applied_security_classification provides the date the items in the security_classification_item select	action, applied_action_assignment, applied_person_and_organization_assign ment, applied_organization_assignment, approval_person_organization, certification, contract, organizational_project, security_classification, versioned_action_request @@@@@@@@@@@@@@@@@@@@@@@@ *********************** action *********************** In AP 232 the mapping table will be updated to show action being associated to date_and_time_item. Since action is the supertype of executed_action both action and executed_action are members of the date_and_time_item select type.

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	type where classified
	
	*****************************
	
	executed_action
	*****************************
	
	date_and_time applied to executed_action provides the date the change_identification information took affect.
		`************************`
		`applied_action_assignment`
		`***********************`
		In PDM Schema Usage Guide can not find requirement for assigning a date_and_time to an applied_action_assignment. Assigning a date and time to a applied_action_assignment has been added to complete the superseded for an item concept.
		
		`************************`
		`applied_person_and_organization_assign`
		`ment ************************`
		Can not find requirement for applied_person_and_organization_assign ment having a date or time associated to it in the PDM Schema Usage Guide.
		
		In AP 214 a date_and_time is applied to an applied_person_and_organization_assign ment to provide a sign-off capability. Open issue – Need to ask AP 214 users what are the different requirements that drove to proved two different mappings for approving product data. The first one is to assign a person_organization with an associated date_and_time to product data with a role of 'signoff'
		The second on is to use approval with an associated approval_person_organization and approval_date_time.
		
		`************************`
		`applied_organization_assignment`
		`************************`
		Can not find requirement for applied_organization_assignment having a date or time associated to it in the PDM Schema Usage Guide.

In AP 214 a date_and_time is applied
to   an
applied_person_and_organization_assign
ment to provide a sign-off capability.
Open issue – Need to ask AP 214 users
what   are   the   different   requirements
that drove the descision to provide
two different mappings for approving
product data.   The first one is to
assign a person_organization with an
associated date_and_time to product
data with a role of 'signoff'
The proposed resolution : is to use approval with an
associated   approval_person_organization   and
approval_date_time.   to   satisfy   this   signoff
requirement.

* *
approval_person_organization
* *
AP   232   will   add
approval_person_organization   to   the
date_and_time_item   select   type   to
allow the mapping of a single approval
instance with multiple people signing
off on the approval. Applying date to
an approval_person_organization is not
the preferred mapping that should be
reflected   in   the   PDM   schema   usage
guide.
PDM schema Usage Guide issue : Based on rule in AP 214
and AP 203(approval_are_assigned) which are reflected in
Figure 58 – Multiple Approval Cycle Instance Diagram in usage
guide. Changes to AP 232 are :
- add these rules to AP 232 to enforce existence of
  relationships   between   the
  part_identification.product_definition_formation   and
  approval(decomp-1 and decomp-2) instances.
- replace   string   value   in   attribute
  approval_relationship.name from e.g. 'approver group'
  to 'decomposition' in AP 232

		PDM schema Usage Guide issue : Need to change some wording in section 13.2.1.4 approval_person_organization :
		
		- Remove constraint that requires that a date_and_time be applied to all instances of approval_person_organization. This is located in the *Preprocessor Recommendation* section. Date and time are already available by instantiating an approval_date_time construct for each approval in a multiple approval hierarchical relationship structure. When there is Multiple approvals with Hierarchical relationships an applied_data_and_time applied to aproval_person_organization is not needed. Do not understand why a Single approval instance with multiple person/organizations approach is needed when this is already taken care of with the multiple approvals approach, providing a date and time for each approver. The requirement to have an applied_date_and_time applied to approval_person_organization is not needed because a date is all ready applied to approval because of the rule in AP 203 which are
		- (approval_needs_approval_date_and_time and approval_needs_approval_person_organization) AP 214 has rule that states (approval_person_organization_requires_date_time) This AP 214 rule is in conflict with AP 203 and AP 232. This needs to be resolve
		
		`********************`
		` certification`
		`********************`
		` In AP 232 the association of date and`
		`time with  certification was added to`
		`the  ARM  to  complete  the  scope  of`
		`certification.`
		
		`   contract`
		`********************`
		`In AP 232 the approval of a contract`
		`is done through approval of a document`
		`(through PDF of the contract).  AP 232`
		`approves   the  submittal  of  product`
		`information    based    through    the`

| | | relationship between the product information and the contract. This way each part or document can be approved independently from one another.

In AP 232 the association of date and time with contract was added to the ARM to complete the scope of contract. It provides the creation date of the contract.

****
organizational_project
****
Can not find requirement for organizational_project having a date or time associated to it in the PDM Schema Usage Guide.
Added project object in AP 232 ARM which when mapped uses the association from organizational_project to date to satisfy the requirement of a start and end date. Therefore organizational_project will be a member of the date_time_item select type in both AP 232 and the PDM Schema.

****
security_classification
****
Can not find requirement for security_classification having a date or time associated to it in the PDM Schema Usage Guide.
Applying a date and time to a security_classification has been added as an option with applying a date and time to an applied_security_classification_assign ment. The used of this new option |

| | | ```
limits the reuse of a particular
instance of security_classification to
be applied to product data that has
the same classification and
declassification dates.

*********************
version_action_request
*********************
applying a date and time to a
version_action_request has been added
to complete the scope of superseded
items.
``` |
| Date_item | ```
applied_contract_assignme
nt,
applied_security_classifi
cation_assignment,
executed_action,


@@@@@@@@@@@@@@@@@
@

Same as data_and_time_item
``` | ```
Action,
applied_action_assignment,
applied_person_and_organization_assign
ment,
applied_organization_assignment,
approval_person_organization,
certification,
contract,
organizational_project,
security_classification,
versioned_action_request

@@@@@@@@@@@@@@@@@@@@@@@

Same resolutions as Date_and_time_item
``` |
date_time_or_even t_occurrence		event_occurrence
		Resolution : event_occurrence will be added to date_time_or_event_occurrence select type to support applying time_interval_effectivity
description_attribut e_select		action_request_solution context_dependent_shape_representation
		action_request_solution
		action_request_solution will be added to

		description_attribute_select. action_request_solution is in AP 232 to support the superseded entry mapping.
		context_dependent_shape_representation
		(*)context_dependent_shape_representation will be added to description_attribute_select. context_dependent_shape_representation is in AP 232 to support completion of the data_definition_entry_item to file (geometry) relationship.

Document_reference_item	`alternate_product_relationship,`
	`applied_document_reference,`
	`assembly_component_usage_substitute_with_ranking,`
	`descriptive_representation_item,`
	`document_file,`
	`executed_action,`
	`externally_defined_symbol_and_placement,`
	`make_from_usage_option,`
	`make_from_usage_option_with_reference_designator,`
	`product,`
	`product_definition_formation,`
	`product_definition_occurrence_relationship,`
	`property_definition,`
		`Action_method,`
		`product_definition_formation_relationship,`
		`versioned_action_request`
		
		`@@@@@@@@@@@@@@@@@@@@@@@@`
		
		In the PDM Schema Usage Guide, section 10 – Document and File Association with Product Data, the last sentence in the third paragraph needs to be changed. It states « Since external files are represented by the entity document_file (a subtype of document), only the applied_document_reference entity is required to associate an external file as a reference to other product data."
		This statement is incorrect. A document_file can be associated to a product_definition using a product_definition_with_associated_documents (PDWAD). A PDWAD is used to associated a document view with the file or files that represent that view.
		
		`*********************** action_method`
		`***********************`

			Question why action_method_with_associated_document s is not used instead of document_reference to associate a document with an action_method. AP 232 uses action_method_with_associated_document s instead of document_reference for this requirement. Also can not find requirement for action_method having a document associated to it in the PDM Schema Usage Guide. Resolution : Include optional mapping for relating a document to a method_action using document_reference_item. ************************* Product_definition_formation_relations hip (PDFR) *********************** (In DIS of AP 232) Can not find requirement for product_definition_formation_relations hip having a document associated to it in the PDM Schema Usage Guide. Resolution : Include optional extended mapping path for relating a document to a superseded entry change (product_definition_formation_relation ship) using a document_reference_item ********************** Versioned_action_request ********************** Can not find requirement for versioned_action_request having a document associated to it in the PDM Schema Usage Guide. Resolution : Include optional extended mapping path for relating document to a superseded entry change request (versioned_action_request) using a

		document_reference_item.
Document_usage_constraint_item	alternate_product_relationship, applied_document_reference, assembly_component_usage_substitute_with_ranking, document_file, executed_action, externally_defined_symbol_and_placement, make_from_usage_option, make_from_usage_option_with_reference_designator, next_assembly_usage_occurrence, product, product_definition, product_definition_formation, product_definition_formation_relationship, product_definition_occurrence_relationship, product_definition_relationship, product_definition_with_associated_documents, promissory_usage_occurrence, property_definition, quantified_assembly_component_usage, shape_aspect, shape_aspect_relationship, specified_higher_usage_occurrence	Currently in the PDM Schema document_reference_item is pointed to by both applied_document_reference and applied_document_usage_constraint_assignement. AP 214 does not use document_usage_constraint_item as the select type for document_usage_constraint. Assume AP 214 did this for convinous because it generalizes the association between a document and other product data. AP 232 did not do this. AP 232 followed the standard way to created assignments of management resource constructs to other product data. Resolution : For harmonization purposes AP 232 will change and use the same select type as AP 214 does for document_usage_contraint. This will be done, even through doing this might bring AP 232 further away from being harmonized with other APs. Other down fall of doing this is that there will not be a mapping for each document_usage_constraint to each member of the document_reference_item select type. For document_file and externally_defined_symbol_and_placement a global rule was written to disallow their usage with document_usage_constraint.
Effectivity_context_item	organization, product_definition_format	

	ion	
Group_item	action_status, approval, descriptive_representatio n_item	

Identification_item	application_context,
	document,
		approval_status,*****
		product_definition_formation,
		shape_aspect_relationship
		
		@@@@@@@@@@@@@@@@@@@@@
		
		************************
		approval_status
		************************
		Currently there is not a requirement
		in AP 232 to alias an approval_status.
		There are two ways for harmonization
		to happen :
		   1- add to AP 232
		   2- remove from core PDM schema
		
		Resolution : add approval_status as
		member of identification_item in AP
		232. Added optional extended mapping
		to in approval.status mapping.
		
		*********************
		product_definition_formation
		************************
		The table in section 12, Alias
		Identification, in the PDM Schema
		Usage Guide, (right below diagram 52)
		identifies all objects which aliases
		can be assignment to in the PDM
		Schema. This table does not include
		product_definition_formation.
		
		Also the definition of the Alias
		module reads 'An **Alias_identification**
		may be applied to a part definition,
		an organisation, a file (also in the

		AIM an application context, an approval status, or a security classification level). This is not for the alias identification of people, dates, projects, or for version identification of parts and documents.' So applying an alias (identification_item) to a product_definition_formation is in conflict with the module definition. Alias for a version (PDF) is done through a PDFR. Recommend that product definition_formation be removed from the membership list of identification_item in the PDM schema express. ********************** shape_aspect_relationship ********************** The table in section 12, Alias Identification, in the PDM Schema Usage Guide, (right below diagram 52) identifies all objects which aliases can be assigned to in the PDM Schema. This table does not include shape_aspect_relationship. Recommend that shape_aspect_relationship be removed from the membership list of identification_item.
Language_item	product, product_definition, product_definition_format ion, document_file	
measure_value		celsius_temperature_measure Resolution: add celsius_temperature_measure to

		measure_value select type.
name_attribute_sel ect	product_definition_substitute	action_request_solution context_dependent_shape_representation
		action_request_solution
		action_request_solution will be added to name_attribute_select. action_request_solution is in AP 232 to support the superseded entry mapping.
		context_dependent_shape_representation
		(*)context_dependent_shape_representation will be added to name_attribute_select. context_dependent_shape_representation is in AP 232 to support completion of the data_definition_entry_item to file (geometry) relationship.
Organization_item	applied_contract_assignme nt,	approval, security_classification, versioned_action_request @@@@@@@@@@@@@@@@@@@@@@@ ********************** approval ********************** In section 13.6.3 of the PDM Schema Usage Guide it identifies the assignment of an organization to approval as a capability that is not supported. Also can not find requirement for approval having an organization associated to it in the PDM Schema Usage Guide Approval already has its own unique relationship with organization using approval_person_organization construct. . Recommend removing approval from being a member of the organization_item select type in the PDM Schema. ********************

		security_classification ************************ In section 13.6.4 of the PDM Schema Usage Guide it identifies the assignment of an organization to security_classification as a capability that is not supported. Modules suppports the association of an organization with a security_classification. Resolution : AP 232 will as relationship between security_classification and person_and_organization in AP 232's ARM to harmonize with the PDM Schema and modules ******************** versioned_action_request ************************ versioned_action_request will be incorporated into AP 232 to satisfy the superseded requirement for data_definition_entry_item. In this mapping an optional path to a organization will be included with the role of 'classifier'.
Organizational_project_item	(*)action, *** applied_action_assignment, applied_contract_assignment, applied_identification_assignment, configuration_item, contract, document_file, product, product_definition,	executed_action, *** product_concept @@@@@@@@@@@@@@@@@@@@@@@@ ******************** executed_action ************************ action is a member of the organizational_project_item select type in AP 232. Since executed_action is a subtype of action then

	product_definition_format ion	executed_action should, by default, be a member of the organizational_project_item select type. *********************** product_concept *********************** AP 232 will add product_concept to organizational_project_item by adding optional attribute on Product_model in the ARM.
Person_and_organ ization_item	applied_contract_assignme nt, applied_identification_as signment	security_classification, versioned_action_request @@@@@@@@@@@@@@@@@@@@@@@@@ ******************* security_classification *********************** In section 13.6.4 of the PDM Schema Usage Guide it identifies the assignment of an organization to security_classification as a capability that is not supported. Modules suppports the association of an organization with a security_classification. Resolution : AP 232 will as relationship between security_classification and person_and_organization in AP 232's ARM to harmonize with the PDM Schema and modules ******************* versioned_action_request *********************** versioned_action_request will be

		incorporated into AP 232 to satisfy the superseded requirement for data_definition_entry_item. In this mapping an optional path to a organization will be included with the role of 'classifier'.
Represented_defin ition	property_definition_relat ionship	General_property @@@@@@@@@@@@@@@@@@@@@@@ General_property will be included in AP 232.
Role_select	group_assignment	action_request_assignment certification_assignment @@@@@@@@@@@@@@@@@@@@@@@ Both action_request_assignment and certification_assignment will both be placed in the role_select select type in AP 232.
Security_classificat ion_item	property_definition	document_file @@@@@@@@@@@@@@@@@@@@@@@ document_file is a member of the security_classification_item select type
Supported_item		action_directive @@@@@@@@@@@@@@@@@@@@@@@@@@@ No entity in the PDM Schema references the select type support_item. action_directive is now in scope for AP 232. action_directive would have been placed as a member in the supported_item select type, but

		support_item igot pruned from the AIM long form because no entity referenced it.